

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A light emitting apparatus comprising:

a source of light for emitting light;

a down conversion material receiving the emitted light and converting the emitted light into transmitted light and backward transmitted light; and

an optic device disposed between the source of light and the down conversion material, having at least one transparent side wall absent the down conversion material, configured to receive the backward transmitted light and transfer the backward transmitted light outside of the optic device through the at least one transparent side wall.
2. (Original) The light emitting apparatus of claim 1, wherein the source of light is a semiconductor light emitting diode, including one of a light emitting diode (LED), a laser diode (LD), or a resonant cavity light emitting diode (RCLED).
3. (Original) The light emitting apparatus of claim 1, wherein the down conversion material includes one of phosphor or other material for absorbing light in one spectral region and emitting light in another spectral region.
4. (Original) The light emitting apparatus of claim 1, wherein the optic device includes a light transmissive material.
5. (Original) The light emitting apparatus of claim 1, wherein the optic device includes at least one of a lens or a light guide having a light transmissive property.
6. (Original) The light emitting apparatus of claim 1, wherein the optic device is further configured to direct the light emitted from the source toward the down conversion material.
7. (Original) The light emitting apparatus of claim 1, wherein the optic device includes one of a lens or a light guide for directing substantially all of the light emitted from the source toward the down conversion material.

8. (Original) The light emitting apparatus of claim 1, wherein the source of light is disposed adjacent a first end of the optic device.
9. (Original) The light emitting apparatus of claim 8, wherein the down conversion material is disposed adjacent a second end of the optic device, the second end opposed to the first end.
10. (Previously Presented) The light emitting apparatus of claim 1, wherein the optic device is geometrically configured to transmit the backward transmitted light out of the optic device.
11. (Original) The light emitting apparatus of claim 1, wherein the source of light includes a plurality of semiconductor light emitters.
12. (Original) The light emitting apparatus of claim 9, wherein the down conversion material is deposited on a portion of the second end of the optic device.
13. (Original) The light emitting apparatus of claim 12, wherein the down conversion material is deposited to cover substantially the second end of the optic device.
14. (Previously Presented) The light emitting apparatus of claim 1, including a collecting device for collecting backward transmitted light which has been transferred out of the optic device.
15. (Previously Presented) The light emitting apparatus of claim 14, wherein the collecting device includes a reflector for directing the backward transmitted light that has been transferred out of the optic device away from the collecting device.
16. (Original) The light emitting apparatus of claim 15, wherein (a) the source of light is disposed adjacent a first end of the optic device, (b) the down conversion material is disposed adjacent a second end of the optic device, and (c) the first end of the optic device is disposed adjacent a first end of the reflector.
17. (Original) The light emitting apparatus of claim 1, wherein a geometrical shape of the optic device includes one of a cone, sphere, hyperbola, parabola, ellipse, pyramid, or box shaped.

18. (Original) The light emitting apparatus of claim 1, further including a reflector surrounding at least a portion of the optic device, and a light diffuser deposited on top of at least a portion of the reflector.
19. (Original) The light emitting apparatus of claim 18, wherein the down conversion material is disposed between the source of light and the reflector, and the down conversion material has a curved shape.
20. (Currently Amended) A light emitting apparatus comprising:
a light transmissive cylindrical optic comprising at least two separate segments, each of the separate segments having a planar surface adjacent each other;
at least one light radiation source disposed adjacent an end of the cylindrical optic; and
a down conversion material, disposed along a central longitudinal axis within the cylindrical optic, for at least one of transmitting or reflecting light transmitted by the light radiation source.
21. (Original) The light emitting apparatus of claim 20, wherein the light radiation source is a semiconductor light emitter, including one of a light emitting diode (LED), a laser diode (LD), or a resonant cavity light emitting diode (RCLED).
22. (Original) The light emitting apparatus of claim 20, where the light radiation source is disposed adjacent one lateral end of the cylindrical optic.
23. (Original) The light emitting device of claim 20, wherein the light radiation source includes first and second radiation sources, spaced from each other and both disposed adjacent one lateral end of the cylindrical optic.
24. (Original) The light emitting device of claim 20, wherein the down conversion material includes one of phosphor or other material for absorbing light in one spectral region and emitting light in another spectral region.
25. (Original) The light emitting device of claim 20, wherein the down conversion material is disposed substantially parallel to a longitudinal axis of the cylindrical optic.

26. (Original) The light emitting apparatus of claim 20, wherein the light radiation source includes at least one light source on each side of the down conversion material.

27. (Original) The light emitting apparatus of claim 26, wherein the light sources are mounted on at least one substrate.

28. (Currently Amended) A light emitting apparatus comprising:

a source of light for emitting light;

a down conversion material receiving the emitted light and converting the emitted light into transmitted light and backward transmitted light; and

an optic device disposed between the source of light and the down conversion material, having at least one transparent side wall absent the down conversion material, configured to receive the backward transmitted light and transfer substantially all of the backward transmitted light outside of the optic device through the at least one transparent side wall.

29. (Previously Presented) The light emitting apparatus of claim 28, wherein at least approximately 84% of the combined transmitted light and backward transmitted light is transferred outside of the optic device.

30. (Currently Amended) A light emitting apparatus comprising:

a source of light for emitting light;

a down conversion material receiving the emitted light and converting the emitted light into transmitted light and backward transmitted light; and

an optic device disposed between the source of light and the down conversion material, having at least one transparent side wall, configured to receive the backward transmitted light and transfer the backward transmitted light outside of the optic device between the source of light and the down conversion material through the at least one transparent side wall without passing through the down conversion material.

31.-32. (Cancelled)

33. (Previously Presented) The light emitting apparatus of claim 20, wherein the at least two separate segments are each substantially similar to each other.
34. (Previously Presented) The light emitting apparatus of claim 20, wherein the down conversion material is planar shaped.
35. (Previously Presented) The light emitting apparatus of claim 20, wherein the down conversion material has at least a first side for transmitting light and reflecting light.
36. (Previously Presented) The light emitting apparatus of claim 35, wherein the down conversion material has at least a second side for transmitting light and reflecting light.
37. (Previously Presented) The light emitting apparatus of claim 20, wherein a first segment of the at least two separate segments of the cylindrical optic has a first surface, a second segment of the at least two separate segments of the cylindrical optic has a second surface, and the down conversion material is disposed between the first surface and the second surface.
38. (Previously Presented) The light emitting apparatus of claim 20, wherein the cylindrical optic receives the light reflected by the down conversion material and transfers the reflected light outside of the cylindrical optic.
39. (Previously Presented) The light emitting apparatus of claim 1, wherein the optic device is configured to transfer at least a portion of the backward transmitted light outside of the optic device through the at least one transparent side wall without the at least a portion of the backward transmitted light being reflected off the at least one transparent side wall.
40. (Previously Presented) The light emitting apparatus of claim 37, wherein the first surface is a first planar surface and the second surface is a second planar surface.
41. (Previously Presented) The light emitting apparatus of claim 20, wherein each segment of the at least two separate segments of the cylindrical optic is comprised of a solid material.